UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,225	12/14/2001	David Brian Wecker	MSFT-0669/171951.1	4177

7590 10/12/2005

Susan C. Murphy
Woodcock Washburn LLP
46th Floor
One Liberty Place
Philadelphia, PA 19103

EXAMINER	
MIZAN, SHAHIN	
ART UNIT	**PAPER NUMBER**
2132	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,225	WECKER, DAVID BRIAN	
	Examiner	Art Unit	
	Shahin Mizan	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 have been examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 4-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Candelore et al. (US Patent # 6,061,449).

As per independent claim 1, Candelore et al. teaches a method of generating a machine identifier comprising:

allocating a file comprising one or more randomly-located memory blocks, each of the blocks having an object identifier based on the block's location in a memory *(note Fig. 1 – a file can be created in the external memory labeled as 110 using randomly located memory blocks; also note column 18, line 47; also note column 19, lines 36-43; also note column 2, line 13 – the invention is applicable to Java language implying object oriented methodology)*; and

creating a machine identifier based on the locations of the one or more memory blocks *(note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device)*.

As per claim 2, which is dependent on claim 1, Candelore et al. teaches the method of claim 1, further comprising:

allocating a plurality of first blocks *(note column 24, lines 21-23 – a one block implementation is described; also note column 20, line 30 – multi blocks or chaining concepts are described; also note column 11, lines 6-19)*;

randomly de-allocating a subset of said plurality of first blocks, whereby the de-allocated blocks become available for allocation, and wherein at least some of the randomly-located memory blocks are selected from the de-allocated blocks *(note random number generator block in Fig 1. and column 11, lines 23-25 – the mechanism for accomplishing this function is provided)*.

As per claim 4, which is dependent on claim 2, Candelore et al. teaches the method of claim 2, wherein said act of allocating a plurality of first blocks comprises creating a plurality of records contiguously located in said memory *(note random number generator block in Fig 1. – using the random number generator memory blocks can be created in the external RAM based memory in a contiguous fashion; also note Fig. 6 – an example mapping of blocks is shown)*.

As per claim 5, which is dependent on claim 1, Candelore et al. teaches the method of claim 1, further comprising:

transmitting said machine identifier to a remote computing device which creates a program based on said machine identifier *(note column 18, lines 14-17 – the machine ID can be transmitted via the stated communication links e.g. telephone line or internet)*; and

receiving said program from said remote computing device and storing said program in said file, said program being adapted to check that the object identifiers of the memory blocks of which the file is comprised are consistent with said machine identifier *(note column 18, lines 14-17 – the software or program is received into the external memory*

via the communication link stated e.g. telephone line or internet; also note Fig. 1 – the mechanism for verifying the embedded machine ID dependent code is shown).

As per claim 6, which is dependent on claim 5, Candelore et al. teaches the method of claim 5, wherein said program operates to decrypt encrypted content when said program is running on a device having a particular machine identifier, and wherein said program denies decryption of said encrypted content if the object identifiers of said memory blocks of which the file is comprised are inconsistent with said machine identifier *(note Fig. 1 – the encryption and decryption mechanism is described; also note column 24, lines 36-45 – various encryption algorithms and scrambling algorithms described).*

As per claim 7, which is dependent on claim 5, Candelore et al. teaches the method of claim 5, wherein said machine identifier comprises a concatenation of the object identifiers of said memory blocks of which the file is comprised, wherein the machine identifier is embedded in the program, and wherein the program checks whether the machine identifier is consistent with the object identifiers by concatenating the object identifiers of the file in which the program is stored and comparing the concatenated object identifiers to the embedded machine identifier *(note Fig. 1 – a file can be created in the external memory labeled as 110 using randomly located memory blocks; also note column 18, line 47; also note column 19, lines 36-43; also note column 2, line 13 – the invention is applicable to Java language implying object oriented methodology; also note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device).*

As per independent claim 8, Candelore et al. teaches a computer-readable medium having stored thereon computer-readable instructions that:

allocate a file in memory, said file comprising at least a first block and a second block, said first block being associated with a first randomized value representing a first location in memory where said first block is located and said second block being associated with a second randomized value representing a second location in memory wherein said second block is located *(note Fig. 1 – shows the hardware and associated software to accomplish these functions; note column 24, lines 21-23 – a one block implementation is described; also note column 20, line 30 – multi blocks or chaining concepts is described; also note column 11, lines 6-19)*; and

generate a machine identification based on said first value and said second value *(note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device)*.

As per claim 9, which is dependent on claim 8, Candelore et al. teaches the computer-readable medium of claim 8, wherein said machine identification is generated by concatenating at least said first and second values *(note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device)*.

As per claim 10, which is dependent on claim 8, Candelore et al. teaches the computer-readable medium of claim 8, having stored thereon further computer-readable instructions that receive a program from a remote computing device and store said program in said file, said program being adapted to check that said machine identification is consistent with the values associated with said first and second blocks *(note column 18, lines 14-17 – the software or program is received into the external memory via the communication link stated e.g. telephone line or internet; also note Fig. 1 – the mechanism for verifying*

the embedded machine ID dependent code is shown).

As per claim 11, which is dependent on claim 10, Candelore et al. teaches the computer-readable medium of claim 10, having stored thereon further computer-readable instructions that receive said first value and said second value from a list of a plurality of available locations in memory *(note Fig. 1 – shows the hardware and associated software to accomplish these functions; note column 24, lines 21-23 – a one block implementation is described; also note column 20, line 30 – multi blocks or chaining concepts is described; also note column 11, lines 6-19).*

As per claim 12, which is dependent on claim 11, Candelore et al. teaches the computer-readable medium of claim 11, having stored thereon further computer-readable instructions that randomize said list by adding and deleting records selected at random by a random number-generating module *(note Fig. 1 – shows the hardware and associated software to accomplish these functions; also note the random number generator block).*

As per claim 13, which is dependent on claim 12, Candelore et al. teaches the computer-readable medium of claim 12, having stored thereon further computer-readable instructions that wait a specified period of time before allocating said file *(note Fig. 1 – shows the hardware and associated software to accomplish these functions).*

As per independent claim 14, Candelore et al. teaches a system for generating a machine identification for a computing device comprising a file system that allocates storage blocks, each of the blocks having a block identifier that represents the location of a block in a memory of the computing device, the file system maintaining a list of unused locations in the memory that may be allocated for storage of information, the computing device having a database module that allocates memory in which to store

database records, that de-allocates records upon request, and that places de-allocated records on the list whereby the de-allocated records may be reallocated for storage of information, the system comprising:

a database creation module that uses said database to allocate a number of dummy records *(note column 23, line 38 – capability for generating and dealing with dummy data between storage and secure device is described; also note column 18, line 62 and Fig. 1 – describes the database functionality; also note claim 14 and 26 in columns 33 and 34)*;

a random number generator that selects dummy records to be deleted *(note Fig. 1 – refer to the random number generator block which perform this function)*; and

a machine identification generator that allocates a file comprising a plurality of blocks allocated from the list of unused locations in the memory and generates a machine identification based on the block identifiers for the blocks of which the file is comprised *(note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device)*.

As per claim 15, which is dependent on claim 14, Candelore et al. teaches the system of claim 14, further comprising:

a software acquisition module that uploads the machine identification to a server which creates a program based on the machine identification and which stores the program in the file, the machine identification being embedded within the program, the program containing instructions which verify that the machine identification embedded within the program is consistent with the block identifiers of the blocks comprising the file in which the program is stored *(note column 18, lines 14-17 – the mechanism for uploading the machine ID and receiving the program that embeds the machine ID is described; also note Fig. 1 – the*

mechanism for verifying the embedded machine ID dependent code is shown).

As per claim 16, which is dependent on claim 15, Candelore et al. teaches the system of claim 15, wherein the machine identification is embedded in the program in an obfuscated form *(note column 16, line 65 – the obfuscation technique is described; also note Fig. 1 – the obfuscation technique can be used to obfuscate a program).*

As per claim 17, which is dependent on claim 14, Candelore et al. teaches the system of claim 14, wherein said machine identification generator generates the machine identification by concatenating the block identifiers for the blocks of which the file is comprised *(note Fig. 1 and column 19, lines 36-43 – a unique machine identifier can be created using the object ID associated with the memory blocks in the storage device).*

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Candelore et al. as applied to claim 1 above, and further in view of Cha et al. ("Object-Oriented Design of Main-Memory DBMS for Real-Time Application, 1995).

As per claim 3, Candelore et al. differs from the claimed invention in that he inherently provides a mechanism for performing the functionality of an in-memory

memory database (*note Fig. 1 – a file can be created in the external memory labeled as 110 using randomly located memory blocks; also note column 18, line 47; also note column 19, lines 36-43; also note column 2, line 13 – the invention is applicable to Java language implying object oriented methodology*), but fails to mention a database module by name to create a plurality of records. Cha et al., however, does teach this limitation in a method similar to that of Candelore et al. He indicates a system having a database module that stores database records, wherein database records are allocated from a common pool of memory to create a plurality of records *(note the entire paper – the concept, method, and approach described in the paper can be used to perform the claimed function)*.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method taught by Candelore et al. to comprise a database module as taught by Cha et al., since they both teach the allocation and de-allocation of memory within the same field of endeavor (*object oriented approach to advances in software technology*) and with the same problem sought to be solved (*advances in software technology*).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kotani et al. (US Patent # 6,247,131) teaches an information management method and recording medium.

Herlihy et al. (US Publication # 2002/0111997) teaches methods and systems for securing computer software.

Paolini et al. (US Patent # 6,847,948) teaches a method and apparatus for secure distribution of software/data.

Ginter et al. (US Patent # 6,640,304) teaches systems and methods for secure transaction management and electronic rights protection.

Aucsmith et al. (US Patent # 5,892,899) teaches tamper resistant methods and apparatus.

"White paper: Main Memory vs. RAM-Disk Databases: A Linux-based Benchmark", Dec. 5 2001, teaches a database module similar to that of Wecker.

Technical Note TN1103 "Uniquely Identifying a Mac OS Computer" teaches a file system similar to that of Wecker.

Mayford B. Roark et al. STC 96 "Embedded Real-Time and Database: How Do They Fit Together?", Thursday, 25 April 1996, teaches a database module similar to that of Wecker.

John Saldanha "A File System for Mobile Computing", December 1993 Technical Report 93-1, teaches a file system similar to that of Wecker.

Inquiries

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahin Mizan whose telephone number is 571-272-0687. The examiner can normally be reached on M-F 8 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shahin Mizan
Examiner
Art Unit 2132

SM

SPE 2132